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CHINA REPORT

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PEOPLE'S REPUBLIC OF CHINA

ABSTRACTS

NATIONAL DEVELOPMENTS

LEADERS ON 12TH CPC CONGRESS DOCUMENTS ON QUADRUPLING GVAIO

HK161313 Beijing JINGJI GUANLI in Chinese NO 12, 15 Dec 82 pp 2-7

["Collection of Articles on the Study of the 12th CPC Congress Documents"--passages within slantlines published in boldface]

[Text] Article by Xu Jialong, first secretary of Jiangsu Provincial Committee: "We Have Full Confidence in Achieving Quadruplication"

Since the 12th CPC Congress, Jiangsu Province has been the same as anywhere in China. The broad mass of cadres and people warmly support and are fully confident of the strategic goal proposed by the CPC to strive to quadruple the total annual output value of industry and agriculture.

As for Jiangsu PRovince, we are qualified to do our bit in quadrupling the total annual output value of agriculture and industry for the whole country.

//First, the basis of agriculture is relatively deep and solid; its potential is still great.// The rural commodity economy in our province has always been relatively developed. In future in rural economic work, we must continue to uphold the principle of "never neglecting the grain production, and actively developing diversified economy" and take the road of comprehensive development of agriculture, sideline production, industry and commerce. According to the investigations of experts, grain faggots produced by the whole province amount to fifty billion jin, 10 percent of which can feed 500,000 head of dairy cows which can render 5 billion jin of milk annually. Just this one item can increase agricultural output value by 1.2 billion yuan. If we further carry on the processing of milk food in depth, output value will then see an increase of several billion yuan. Agriculture is the base of the national economy as well as the base of the strategic goal of quadruplication. Now that the agriculture is developing steadily, there will be a reliable guarantee and solid foundation for the quadruplication of the whole national economy.

//Second, industry is correspondingly large in scale, and the foundation is relatively good.// Jiangsu is one of the "cradles" of our country's national capitalist industry and commerce. It enjoys a relatively long history of development of modern industry. Since the founding of the country, not only have the original light textile and construction material industries developed

rapidly but developing industrial departments such as engineering, electronics, chemistry have also been established. And they have enjoyed a certain dominance. Of course, there exist great differences when comparing our province's level of industrial management, production, technology and organization with the advanced level both inside and outside our country. Take Shanghai for example; we have more or less the same fixed assets as Shanghai, yet our industrial output value differs by over 10 billion yuan, which means a difference of 10 billion yuan in financial income (excluding factors that cannot be counted, the discrepancy is about 6 billion yuan). Difference means potential. With the difference narrowed, the speed of development will accelerate. Therefor if only we readjust industrial enterprises and management, fully exploit the existing potential and at the same time quicken the construction of key projects under the precondition of promoting economic results, the continual development of our province's industrial production will be guaranteed.

//Third, geographical location is favorable to exchange with foreign countries.// This is favourable to our developing foreign trade, utilizing foreign funds and introducing advanced technology. These few years we have achieved marked results by utilizing foreign funds, introducing technology and technology and transforming existing enterprises. From 1978 to September of this year, the whole province succeeded in negotiating 727 projects utilizing foreign funds, 440 of which are now in operation; and we have already returned $100 million of equipment expenses. Therefore, to vigorously develop foreign trade, utilize foreign funds and introduce advanced technology will play a vital role in speeding up the technical reform of the existing enterprises and quickening the tempo of constructing modernization.

//Fourth, cultural education is relatively developed, and science and technology enjoys a certain status.// In our province, there is a technical contigent of more than 200,000 people. We have 803 organizations of scientific research, 46 institutions of higher education and 118 technical secondary schools. The problem now is to grasp well the work in two respects: One is to organize the present scientific and technical contigent to be geared to production and construction, and given them aid in overcoming difficulties. This can be very useful in the near future and achievements will be made soon. The other is to strengthen the investment in intelligence by adopting various means such as school training, encouraging people to teach themselves skills, thus further exploring the resources of talents. These achievements may not be obvious in a short period of time yet are indispensable in guaranteeing the constant progress of science and technology. If only we grasp well the work in these two respects, it will be possible to turn the potential productive forces to productive forces in reality, and therefore display the motivating role of science and technology concerning the production of industry and agriculture.

In order to make use of existing conditions and make contributions to achieving quadruplication, it is necessary to carry out earnestly the reform of organizations and systems. This is a key link in readjusting the contradiction between the relations of production and productive forces, and the contradiction between superstructure and economic basis. Taking our province for example, it is necessary to grasp well the following four respects: One is the reform of organizations and systems including the reform of the system

of leadership. Proceeding from overcoming bureaucracy and promoting work results, providing well-matched leading cores at all levels, achieving cooperation between new and old cadres as well as the replacement of old cadres by new cadres; second is the reform of the system of administrative management, gradually accomplishing the target of having the big and medium-size cities as the centre and small towns and cities as links, taking the extensive rural areas as the base, developing the economic, scientific, technical and culture connection between urban and rural areas as well as between regions, forming networks, causing the economy of the urban and rural areas to develop simultaneously; third is the reform of the system of economic management, doing away with the dividing line of trades, regions and state-ownership, organizing economic combines and developing socialized mass production of specialized coordination; foruth is further perfect the system of economic responsibility and the system of production responsibility in industrial and commercial enterprises as well as communes and brigades in the countryside. If only we grasp well these four respects it is possible to further display the people's role of subjective initiative and propel the development of production and construction.

Article by Yang Yichen, First Secretary of Heilongjiang Provincial CPC Committee: "Create New Situations and Glaze a New Trail"

At present, just like anywhere throughout the country and on the various fronts, Heilongjiang Province is now discussing and implementing the lofty goal proposed during the 12th CPC Congress of quadrupling the total annual output value of agriculture and industry by the end of this century. Not long ago, we held an enlarged committee session and had a thorough discussion. We agreed unanimously that quadruplication was certain to be realized. We made an initial estimate that by the year 2000, the total annual output value of agriculture and industry of the whole province will be 150 billion, which means an increase of 3.4 times over the 33.7 billion yuan in 1982. The annual average increase of the total output value of agriculture and industry was 6.5 percent the previous 10 years, and 9 percent the latter 10 years. Comrades present at the present were fully confident of this and they believed that it was probable that we would realize the goal earlier if the work was well done.

In the past, our province was the base of heavy industrial as well as commodity grains. It is richly endowed with resources so there are many favourable conditions for materializing quadruplication, yet there are sure to be quite a lot of difficulties. Our economic conditions dictate that primary products such as grain, coal, timber and petroleum cannot be quadrupled. (Coal might be doubled, but petroleum will decrease gradually.) If so, where is the way out? It will lie in further emancipating ideas, seeking new roads, opening up new spheres, and creating new levels.

It will not do to attach all the importance solely to grain if one wants to achieve great development in agricultural production. It is necessary to develop diversified economy vigorously. We should enhance in an all round way the level of agricultural mechanization and fully display the superiority of mechanization, thus freeing 1/2 to 2/3 of the labor force from the fields and use it in the production areas such as forestry, animal husbandry, sideline

production, fishery and industry. The Huoxing brigade of Anda County has increased its dairy cows by 20 times in the last 3 years, each household reaching an average of 1.7 head. Just this one item means that each household has an average income of two thousand yuan annually. Sunwu County has combined forestry with agriculture in the last 2 years, and has set up a company of joint management by forestry, industry and commerce. They have set up 3 forests of joint management, 87 responsible areas of forest management, 1.24 million mu of forest fields of collective management; 22 thousand mu of mountains were spared for the personal needs of the peasants, which have produced 15 thousand cubic metres of timber in the last 2 years. This year the comprehensive utilization product value of timber can reach 2.25 million yuan, an increase of 3.5 times over that of 1979. Come to think of it, if only we keep developing diversified economy horizontally and vertically it is highly possible to quadruple the total output value of agriculture without the help of industry.

An important aspect in realizing the quadruplication of industrial output value is the vigorous development of intensive processing and comprehensive utilization. In this way we can create more output value and accumulate more tax interests with just as many resources. The potential is great. The utilization rate of felling, sawing and processing "the three remnants" of timber by forest workers of the whole province is merely 27.7 percent. We must strive to each about 85 percent 1990. There is great potential in developing intensive processing especially in chemical fibres, beet, hemp and petroleum etc. To develop intensive processing by making use of the different varieties of petroleum and chemical materials provided by the 30 ton polyethene project will give us an estimated increased output value of over 7 billion yuan. Develop vigorously food processing industry which is based on the material from agricultural by-products. The market is big and the potential is tremendous.

Industry, agriculture, all walks of life, factories new and old, whoever it is, must all rely on the progress of science and technology as a principle means of promoting economic results and realizing quadruplication. For that particular purpose, we should specially reinforce the study of applied science. Science and technology should be geared to economic construction, serving production as well as the technical transformation of enterprises. It is necessary to carry out on an extensive scale the new activities of mass technical reform, organize technicians in the field of production and scientific research and technicians of institutions of higher education to overcome the difficulties, achieving faster speed and greater results in technical advance.

From now on, the development of industry mainly lies in exploring potentials and promoting economic results. Unite speed and results so as to get the rate of increase of economic results higher than the rate of increase of output value. We must basically eliminate management loss and partly solve losses resulting from policies. Because of this, we must implement well the readjustment and restructuring of industry. In the meantime, we must proceed from the overall situation of economic development, display the role of key cities, and develop rural areas with the help of urban areas, integrate rural and urban areas, organize coordination and serve each other, thus taking the new road of rural and urban areas being combined to develop the economy hand in hand.

Article by Huo Shilian, first secretary of Shanxi Provincial CPC Committee: "The Revival of Industry Must Depend Both on Policies and on Science"

The 12th CPC Congress proposed that by the end of this century we should strive to quadruple the total annual output value of agriculture and industry of our country. It is an important mission rendered us by history as well as the keen aspiration of the Shanxi people to build Shanxi into a base of coal resources and the heavy and chemical industries. We should uplift our spirits and surge our way head on for the accomplishment of this great task.

Our province is richly endowed with natural resources, especially coal, which enjoys exceptional advantages. At present the annual output of coal of the whole provice is over 130 million tons, which is 1/5 of the total output of coal of the whole country. The amount of coal transferred to other places is 3/5 of the total amount of the whole country. Both rank first in the whole country. Apart from that, the industrial base of our province is fairly solid and has initially formed an independent industrial system. This provides favourable conditions for the economic revival of our province.

The problem now is that the enthusiasm of the majority of workers and staff of our province have not been fully brought into play. The level of management and technology is backward and the economic results are low. In 1981, the total sum of capital possessed by over 2,100 state-owned enterprises of the whole province was 14.9 billion yuan, ranking 10th in the whole country, and output value ranking the 26th in the whole country. The realized value of per-100-yuan fixed assets and the labour productivity of the whole people rank 21st and 23d respectively. Yet proceeding from another angle, it simply indicates that there is great potential in the industrial development of our province. Let's again take the labour productivity of the whole people as an example. If we reach the average level of the whole country, we can have an increase of 5 billion yuan in output value which will be 40 percent of the present total output value of industry. If all the main technical and economic quotas catch up or get near the average level of the whole country, the total industrial output value of our province can be doubled.

Since the third plenary session, the production situation of our province's agriculture has developed relatively fast. Now, compared with industry and commerce, agriculture appears to be more lively. Its experience of development has given us profound revelation that the revival of industry should depend on both policies and the progress of science and technology.

For a long period of time, we have placed too much stress on new construction and expansion, and neglected technical transformation of existing enterprises in developing industry, thus causing the aging of equipment in many enterprises. Apart from "extended service", and "operation in sickness" there are technical aging and technical know-how ageing. The negative effect on the national economy is rather serious. If we do not make up our minds to change this situation, develop industry on the basis of the technical advance of the present enterprises and earnestly adopt new equipment, new techniques and new crafts, the strategic goal of quadrupling will not be achieved and what is more, modernization will not be realized.

A quick way to carry out technical transformation is to vigorously popularize and apply available new techniques and new achievements. In the past 3 years, the industrial and transportation enterprises of our province have popularized 52 items of new techniques approved by the State Council. According to incomplete figures, we have created over 16 million yuan of output value, economized on energy resources over 4.3 million yuan and gained over 4 million yuan of profit. On the whole, however, we are still very weak in carrying out this item of work. There are still many technical fruits of production with fairly good economic results which have been laid up on the shelf and forgotten by people. It is necessary for us to put this item on the main agenda, and pay earnest attention to it; at the same time, we should seize time to carry out scientific and technical projects that are being studied and tackled, so that they can be applied to technical transformation as soon as possible.

Technical transformation should be planned in an overall way, and be implemented gradually with priority given to key projects. First of all, an overall plan of trade should be made, and then with its guidance work out plans for the localities, key cities and work out overall plans for enterprises. Our propositions are: First, let mechanical industry take the lead in technical transformation, so as to provide advanced technical equipment for the various departments especially the coal industry and the light textile industry; second, lay the stress of technical transformation of coal industry on promoting mechanization, the transference of energies and comprehensive utilization, at the same time, give consideration to safety devices and environmental protection; third, pay attention to the construction and transformation of departments of railway, electric power, communication and transportation, which are the weak links of economic construction in our province, so as to meet with the needs of the construction of coal and heavy chemical bases of our province; fourth, take the whole country into account: our province should confirm heavy-duty construction, yet light industry should also be developed correspondingly. Therefore, we have to take pains to carry out the technical transformation of light industry properly and step by step. The funds for technical transformation should be based on self-reliance. It is necessary to handle and use well the funds for technical transformation allocated to Shanxi by the state, and bring it into full play.

Technical transformation of enterprises cannot do without the progress of science and technology, while research, popularization and application of advanced science and technology, as well as the solution of significant economic and technical problems cannot do without talented people with specialized knowledge. At present, scientific and technical personnel of our province are badly lacking, and far from meet the demands of the construction of modernization. It is necessary to attach great importance to the training, exploitation and the right use of talented people so as to bring the enthusiasm of the broad mass of scientific and technical personnel into play, and enable them to distinguish themselves in the great cause of realizing economic revival.

It is necessary to rely on scientific and technical advance to revive the economy. Besides displaying the role of scientific and technical personnel, it is necessary to bring the enthusiasm of enterprises and staff and workers into full play and enhance the workers' sense of responsibility of being the masters. Otherwise, the technical advance of enterprises will lose its momentum. Owing to this reason, it is necessary to carry forward and further perfect the economic responsibility system.

To perfect and carry forward the economic responsibility system, it is necessary to grasp big enterprises first. In our province, there are 21 big enterprises with over 10 million yuan of annual tax interest, which amounts to 0.22 percent of the total industrial enterprises. The total output value of these enterprises is 34 percent of the total industrial output value of the whole province; tax interest rate is 61.5 percent of the tax interest of industry. In order to explore the potential of enterprises, enhance economic results and steady financial income, we must pay close attention to this batch of big enterprises, which have a bearing on the overall situation of the national economy.

As for small enterprises, we must relax our policies to make them freer and more lively. We can practice individual or collective contracting. Of course, this form has just started in our province. As for how to combine the characteristics and concrete conditions of each enterprise and popularize and apply them, we ought to make serious studies on the new situations and solve the new problems, especially on how to do a good job in the transformation of the system of finance and tax-income, etc. Moreover, it is necessary to carry out exploration enthusiastically.

On the whole, the pace of industrial construction of our province lags behind many provinces of the whole country. We must go all out to make the country strong, learn from the advanced figures and catch up with them under the guidance of the spirit of the 12th CPC Congress. We should rely on both policies and then on science, strive to create new situation in industrial construction and welcome the coming of the overall economic revival.

Article by Han Ningfu, Second Secretary of Hunan Provincial CPC Committee: "Quadruplication Must Depend on the Progress of Science and Technology:

In order to realize the lofty goal proposed during the 12th CPC Congress, we must implement comprehensively the programmes, principles and policies put forward in the congress. Among them, one very important guiding thought is that to revive the economy we must rely on the progress of science and technology.

As for agriculture, our province has the fertile Jianghan plain with many mountains and rivers, where much can be accomplished. However, there is a large population and a lack of cultivable land. In order to develop the agricultural economy, it is necessary to utilize well the mountain areas and the waters and we must rely on science and technology in order to promote the economic results of the available cultivable land. Grain, especially rice, is abundant in our province, yet its single yield is rather low. Fields of medium and low produce in the whole province constitute about 2/3 of the total

area of cultivable land. Under the condition that the cultivable area cannot be further expanded, we will mainly depend on raising yields in future, so we must practice scientific farming. In order to increase the total output value of agriculture on a large scale, and to enable the peasants to become rich, it is necessary to develop vigorously diversified management and make reasonable readjustment of the proportions of agriculture, forestry, animal husbandry, sideline production and fishery. It will need investigation and research. We should also make a good regional planning, suit measures to local conditions and develop in a comprehensive way. In practicing diversified economy there are the problems of promoting yield and improving quality. In order to solve these problems, it is necessary to rely on science and technology, do a good job in scientific fish-breeding, scientific forest management and scientific animal husbandry, etc. As for the balance of the ecological environment, the maintenance of water and earth, and environmental protection etc., science and technology matter even more than ever.

As for industry, our province possesses over 10,700 enterprises. State-owned industry has fixed assets close to 21.7 billion yuan. We have especially a number of large and medium-sized backbone enterprises whose foundation is fairly good. In future, in order to increase output value under the condition of limited supply of energy resources of coal and petroleum, it is necessary to explore vigorously water and electricity and make use of the new technique of electric power and economizing energy resources to carry out technical transformation in all enterprises. It is also necessary to change the technical process of crafts and the structure of products. What is more, pains should be taken to improve the quality of products and reduce consumption so as to bring about a greater improvement in economic results.

There is a lot of work to be done relying on the progress of science and technology. From the point of view of the work of the CPC committee, we consider that at present it is necessary to pay special attention to the following respects.

First of all, a change in guiding ideology--changing from neglecting scientific and technical advance to paying attention to and relying on scientific and technical advance. Party committees at all levels should earnestly put scientific and technical work on the agenda of importance, should earnestly carry out the party's principles and policies, and solve problems quickly so as to create conditions for the development of science and technology.

Second is to pay attention to talented persons as well as the contingent. Without talented persons, there will be no contingent and the development of science and technology will be nothing but empty words. We should further implement the policies toward intellectuals and fully display the role of the present scientific and technical personnel. The key issue in implementing the policies toward intellectuals is to treat the mass of intellectuals as a supporting force in constructing socialism. At present, special attention should be paid to improving the working and living conditions of middle-aged intellectuals. Specialized personnel with organization and leading ability, and comrades with scientific and technical knowledge and who are enthusiastic in supporting the progress of science and technology should be selected for

the leading posts at various levels. Talented persons are the foundation of pioneer work, while education is the foundation of talented persons. In strengthening the education and the training of talented persons, we must be willing to make efforts and spend money.

Third, earnestly implement the principles for developing science and technology confirmed by the CPC Central Committee and the State Council, further rectify the direction of scientific and technical work, organize the broad mass of scientific and technical personnel to be geared to economic construction and go all out to contribute more to the quadruplication. Local scientific and technical work should mainly study and solve the important problems in economic construction, carry forward the progress of productive technology and raise economic results. The key for local scientific research work should be the study of exploitation and application.

The provincial party organizations at various levels must firmly implement the spirit of the 12th CPC Congress, earnestly lead and help the scientific and technical front of our province to create a new situation, thus making the necessary contribution in realizing this lofty goal.

Article by Shen Yue, Secretary of the Liaoning Provincial CPC Committee: "Make Persistent Efforts To Go on Climbing the new Summit of Quality"

In order to implement the spirit of the party's 12th CPC Congress and continue to climb the new summit of quality, we are determined to pay attention to the following six matters in our future work.

First, have a clear understanding of the situation, continue to practice the shift of emphasis in work. The general objective for struggle of economic construction of our country proposed by the party's 12th CPC Congress is not purely a concept of output value but the unification of speed and economic results and the unification of construction and production, and science and technology.

Further shifting the emphasis of work means the following four main points. (1) Earnestly shift from mainly grasping output and output value in the past to grasp high quality, develop varieties and do a good job in promoting and replacing old products and vigorously developing new products. (2) Shift from the sheet expansion of productivity to grasping technical transformation and the renewal of equipment. (3) Shift from merely speed to earnestly promoting economic results, from neglecting science and technology, and caring only about production to attaching importance to science and technology, administration and management. (4) While fulfilling the "common" demand of society and organizing mass production, we must attend to the "individual" needs of society, handle well the small-scale-multi-variety production, so as to satisfy seasonal characteristics and the characteristics of the ever-changing market in order to cater for the different demands of various consumers.

Second, in order to concentrate our force on improving quality, varieties and standards, we must adopt advanced science and technology. To realize quadruplication should depend mainly on the progress of science and technology. It is necessary to persist in the principle of combining scientific research and production, organizing units of production, units of scientific research and the institutions of higher education to carry out extensively the activities of improving quality and tackle key problems, organize specialists and experts to examine the quality and technology in enterprises, improve the level of technology of factories and guarantee the steady improvement of the quality of products. While carrying out the plan of promoting quality and creating high quality in 1983, work out a feasible plan for varieties that are to be developed in 3 or 4 years and a plan for promoting quality, strive to make a comparatively big change in the quality and varieties of the industrial products manufactured by Liaoning Province in 3 or 4 years' time.

Third enthusiastically carry forward the overall management of quality and realize the scientific management of enterprises by steps. To carry forward the overall management of quality is a scientific means of speeding the promotion of the quality of products and developing varieties as well as an important way to promote economic results. It is necessary to combine it with the promotion of quality and creating fine qualities. It is necessary to combine closely the overall management of quality and the economic responsibility system. Tasks should be assigned to each specific person. Combine the examination of quality with awards and practice the unification of responsibility, rights and interests. It is necessary to practice the method of abundant award and severe punishment, reward for fine quality and no reward for inferior quality. Leading comrades of enterprises, various departments and regions should take the lead in learning the scientific method of the overall management of quality, and put themselves at the head of carrying forward the overall management of quality.

Fourth, it is necessary to attach great importance to the exploitation of new products. The first light industry bureau of Liaoning Province demanded that starting from 1983 till 1985 the output value of new products, new specifications and new designs and colours would be raised from 15 percent of the present total output value to 30 percent. Every factory should have a stock of new products and new technology. It is necessary to put forward the idea of "defeating one's opponents by new varieties, by fine quality, by cheap prices, and by high speed". And in the keen competition, we should be able "to offer products that are not available on the market, to be able to offer large quantities when others have the same stock, offer high quality if others have a large stock, and offer new products when others are able to produce high-quality goods. What is more, propose to the dependent trades and services requirements and plans for creating new products.

Fifth, to strengthen leadership. Pay attention to party committees at various levels, especially the leaders, changing their way of thinking, and pay attention to the making of plans and the implementation of important measures. Governments at various levels should organize departments and organizations of for standards, estimations, intelligence, commodity inspection, foreign trade, commerce, industrial and commercial administration and management to

set up gradually a network of supervising and examining the quality of products, a network of quality information and a network of the feedback on market information. Each region and each department should carry out monthly transference, seasonal examination and six-month preselection on products of fine quality; problems will then be found out and solved on time, thus guaranteeing the accomplishment of quality plans.

Sixth, carry out well education on the situation and task, strengthen the education in communism, further start the activities of "three ardent loves, being the master, make new contributions and establish new customs," work out common service pledges for different service trades and the regulations for staff and workers, teach staff and workers to become laborers with ideals and morals, who are educated and well disciplined. At the same time, strengthen the training of staff and workers, continuously raise the cultural, technical and political quality of the contingent of staff and workers. This is a vital guarantee for the promotion of quality and the development of varieties.

CSO: 4006/268

APPLIED SCIENCES

SCIENCE ACADEMY PRESIDENT REVIEWS 1982 PROJECTS

OW301400 Beijing XINHUA in English 1137 GMT 30 Jan 83

[Text] Beijing, 30 Jan (XINHUA)--Scientists of the Shanghai Institute of Organic Chemistry have succeeded in synthesizing arteannuine, a highly effective anti-malaria drug, the president of the Chinese Academy of Sciences, Professor Lu Jiaxi, announced at the academy's working conference here today.

The anti-malaria drug with a very low content of toxic content, has a unique structure which is very hard to be synthesized. The purification of this chemical compound and its application to clinical medicine, the interpretation of its structure and configuration and synthesis were done by China indepedely.

This is one of the 5,000-odd research projects undertaken by the Chinese Academy of Sciences last year, he said.

The academy had done a fairly good job of its 1982 research program, he said.

According to the statstics of 51 of the 118 institutes of the academy, 1,914 of their 2,063 projects were fulfilled, accounting for 92.8 percent.

Some 300 of the research results gained last year are of major importance to the development of national economy, he added.

The academy's scientists have raised a series of new ideas on the exploitation, utilization and protection of the natural resources of Lop Nor, northwest China.

They completed studies of the Jitai Basin in south China and collected a wealth of scientifid data for the basin's development.

Some of the results made from the expedition to Hengduan Mountains, southwest China, have been applied to production.

A total of 34 works and reports have been written on a comprehensive study of the natural conditions and resources in Tibet.

They collected more than 50,000 data from the environmental studies in the Beijing-Tianjin-Bohai Bay area, one of China's important industrial centers.

The academy's scientists have tackled some key scientific and technological problems in national economy. They trial-produced a number of large-scale integrated circuit components and equipment, devised a work process to recover vanadium from slag at the Panzhihua Iron and Steel Company and produced an array processor which helps computers do 14 million operations per second, particularly good for oil exploration and development.

Scientists have succeeded in cloning the virus gene of hepatitis B, which is of great importance to the research and production of hepatitis B vaccine with genetic engineering methods.

Scientists have discovered the difference between the restriction endonuclease maps of castor and common silkworms through research into the ribosomal RNA gene of the castor silkworm.

By making use of China's own six-beam laser facility, scientists have studied the second harmonic generation of the laser plasma and sighted the time and space resolved spectral splitting, a very important progress, he said.

CSO: 4010/40

APPLIED SCIENCES

POST, TELECOMMUNICATIONS CONSTRUCTION IN SHANXI ACCELERATED

Taiyuan SHANXI RIBAO in Chinese 18 Oct 82 p 2

[Article by Zhang Shouxian [1728 7445 0341], party secretary of the Shanxi Post and Telecommunications Bureau: "Accelerate the Buildup of Post and Telecommunications"]

[Text] Since the Third Plenum of the 11th Party Congress, the party and the state have made many important decisions concerning the development of post and telecommunications and hastened their buildup. The situation in our province is the same as that throughout the nation. A welcomed change has occurred. In 3 years, the number of telephones throughout the province and the cities has increased by 174 lines, postal facilities increased by 442 square meters. The number of phone calls and letter service meeting the 20 quality evaluation standards established by the Ministry of Post and Telecommunications for phone and letter services stabilized at above 80 percent. In 1981, the entire province realized a profit of 4,004,000 yuan, and consecutive annual losses since the time of the Cultural Revolution have been turned around. New housing for workers covered 91,626 square meters. This fully shows the utmost correctness of the party line, principles and policies since the Third Plenum of the 11th Party Congress.

But, because of the 10 years of internal strife and mistakes in our work, there have been too many "debts." Our province's post and telecommunications services still constitute a "backward nerve," far from suiting the needs of national economic development, and in particular, they cannot catch up with the needs in the buildup of our province's coal energy base. The shortcomings are manifested first in the shortage of urban phones. Take Taiyuan and Datong as examples. A comparison between 1981 and 1949 shows that the population has increased six times but the number of telephones in the cities has increased only 1.17 times. The popularization rate is only 0.83 percent. There are more than 2,000 households still waiting to have a phone installed. The total industrial production value of Datong City in 1980 registered an increase of 239 times over that in 1949. The number of urban telephones increased by less than 2 times. Without comparing this with the world's advanced levels, and even compared to the whole nation, this is a low standard.

The second shortcoming is that long distance communications is crowded. There is a serious deficiency in the number of communications network outlets for

mining areas. In 1981, long distance telephone business showed an increase of 3.02 times over that in 1965 throughout the province while long distance telephone lines increased only 1.29 times. The users have to wait for a long time, and the percentage of numbers disconnected and the percentage of calls over the limit are high. Datong City now has 138 large and small coal mines, but there are only three post and telecommunications branch offices. The postal and telecommunications stations of the 14 uniformly equipped coal mines only provide postal service, not telecommunications services. Workers and family members who want to send a telegram or make a long distance phone call must travel several dozen li to and from the branch offices. Also, there are still 102 mining areas throughout the city that do not have telecommunications services. There are also deficient telecommunications facilities at the rest of the coal mining bases such as Fenxi, Huo County, Hangang, and Jincheng.

The facilities of postal services are limited, the speed of delivery is slow, communications equipment is backward, the quality of service is not high, business and management are poor. All of these problems have directly affected the communications of the party and the masses of people. How can we overcome these important factors that limit our nation's economic development? As we were seeking answers, Comrade Hu Yaobang reported to the 12th Party Congress and brought forth before the people of the whole nation the proposal to take the strengthening of the buildup of post and telecommunications in a big way as the glorious strategic goal to realize our nation's socialist modernization and as a key strategy to develop the national economy.

This is not only entirely necessary and entirely correct, but at the same time, it is a big encouragement and an education for every member on the post and telecommunications front. It has further strengthened our sense of glory and urgency to do post and telecommunications work well. We profoundly understand that every message we transmit is closely related to party affairs. Every telegram and every phone call are tied to the pulse of the socialist buildup of the motherland. Today, the 12th Party Congress has given us unlimited strength and courage.

Our general goal is to build a modern telecommunications network on a basic scale that utilizes multiple means, that has a large capacity, that uses wide frequency bands, that is automated, that has many uses, that has both analog and digital equipment, that combines peace time needs and war time needs throughout the province by the year 2000. Loading and unloading of mail, transportation of mail and internal processing must be mechanized. We must provide good quality public and special communications facilities for every sector of society and the national economy, and we must rapidly, accurately, safely and reliably transmit various types of messages. We must be farsighted while establishing ourselves in the present. In the next 3 years, we msut reorganize the 125 enterprises throughout the province well, implement the principle of reorganizing the key points first and then the general points, carry out reorganization in stages and in groups. This year and next year, we must first reorganize the municipal bureaus under provincial jurisdiction, bureaus in the seats of prefectures, central bureaus between industrial and mining areas and counties. The buildup of post and telecommunications must be included in the general plan

to develop Shanxi as an energy base and in urban development plans. We must fully develop the function of existing communications facilities. We must place the improvement of postal and telecommunications services and the improvement of quality of communications concretely in an important position in post and telecommunications work. We must educate workers to establish the ideology of "serving the people, being responsible to the users." We must take the degree of satisfying the needs in society as criteria to inspect our communications services. We must improve communications qulaity, firmly establish the viewpoint of "quality first," implement the principle of "speed, accuracy, safety, convenience" on an overall basis, and be the "foreward sentry" to propagate the spiritual civilization of socialism.

9296
CSO: 5500/4114

LIFE SCIENCES

CLOSE RELATIONSHIP BETWEEN WATER SOURCES, CANCER OF ESOPHAGUS FOUND

Beijing RENMIN RIBAO in Chinese 7 Jan 83 p 4

[Text] New China News Agency reporters Hu Chengqing [5170 2110 3237] and Tan Feng [6151 7364] report that researchers of Tumor Research Office of Hebei Provincial Academy of Medical Sciences launched a esophageal cancer prevention and treatment project in the esophageal cancer high incidence region of She County, Hebei Province and obtained gratifying results.

She County is located in the central part of the Taixing Mountains. Of the 300,000 people in the county, more than 400 persons die of esophageal cancer every year. In the winter of 1978, the researchers of Hebei Provincial Academy of Medical Sciences cooperated with the local tumor prevention and treatment office, the tumor hospital, and units outside the region to carry out a large scale general survey of close to 100,000 persons over 30 years of age in She County and discovered 353 cardio-esophageal cancer patients, 310 primary victims, and 637 cases of severe hyperplasia (precancerous disorder). Integrated Chinese traditional and Western methods have been used to treat the discovered esophageal cancer patients.

While carrying out prevention and treatment of esophageal cancer, the researchers also investigated the environmental factors for high esophageal cancer incidence in that region. They discovered that within the high esophageal cancer incidence region of identical living habits and standards, due to the differences of sources of water, there are some low incidence areas. Later, water specimens of 19 communes of high and low incidence areas were analyzed to discover an obvious difference in the nitrate and nitrite contents of the water specimens of the various areas. This difference is closely related to the high or low incidence of esophageal cancer. They suggested measures to be adopted to reduce the nitrate and nitrite contents of the water and positive action for the prevention and control of esophageal cancer has been taken.

6248
CSO: 4008/49

NEW ADVANCES MADE IN AVIATION MEDICINE

Beijing JIANKANG BAO in Chinese 19 Dec 82 p 1

[Article by Cai Shanwu [5591 6365 2976] Di Guofu [3695 0948 1318]: "Aviation Medicine Science and Technology Conference Commends 241 Research Results"]

[Text] Obvious achievements in aviation medicine science and technology have been obtained by people's liberation army. The Aviation Medicine Science and Technology Conference which opened on 18 December commended 241 items.

The research of a certain Air Force Aviation Medicine Research Institute on "The Immuno-distention Reaction of Microbes and Its Application in Fast Diagnosis" created the "immuno-staining technique" of fast examination of dysentery pathogens. The technique is simple to perform, fast, and the positive rate is 40 percent higher than the culture technique. This research has been approved by the State for a 3rd class invention award. This "silicon resin laryngoplasty, the high frequency electro-tonsillectomy, and the research on pharyngotympanic duct and its application in the prevention and treatment of aviation type otitis media" conducted by Luo Shanggong [5012 1424 0501], Director of the Ear, Nose, Throat Department of Air Force Changchun Hospital were awarded the first class scientific research award. The Department of Dermatology of the Air Force General Hospital applied the liquid nitrogen atomizing theory to the treatment of skin diseases to obtain an effective rate of 81 percent. With respect to aviation medicine, new progress has been made in the prevention and treatment of high incidence common diseases of aviators and such health protection techniques as the elimination of flight fatigue. Air force medical personnel and scientic and technological staff have also accumulated and summarized a large quantity of experiences in medical sciences and technologies. According to incomplete statistics, in the past 4 years, 1,361 papers have been published in domestic journals, in and out of the military; medical books and a large quantity of data in aviation medicine have also been compiled and published. These have had the function of promoting active scientific exchanges.

6248
CSO: 4008/49

NEW ADVANCES MADE IN SKIN FLAPS FOR TRANSPLANT

Shenyang LIAONING RIBAO in Chinese 9 Jan 83 p 1

[Article by Kang Shuchang [0073 2885 1603]: "Forearm Skin Free Graft Technique Successfully Created in China"]

[Text] Forearm skin free grafts used to repair facial defects and organ reconstruction have relieved the sufferings of more than 500 victims in this country. This research result of advanced world-level was accomplished through cooperative efforts of Shenyang Troop General Hospital and China University of Medical Sciences. It has been awarded the provincial 1981 first class great scientific and technological achievement prize.

For a long time, the old fashioned skin tube transplant technique has been employed to repair facial defects and to reconstruct organs. Skin tubes must first be formed in a certain part of the body and the transplant survives only after several surgical operations. The surgery takes a long time (generally several months) and the long term posture fixing causes a great deal of pain to the patient. Yang Guofan [2799 2654 0416], deputy director of Plastic Surgery of Shenyang Troop General Hospital had been deeply concerned with the sufferings of these patients in his several decades of clinical work. Based upon his rich experience and his absorption of related foreign achievements, he first succeeded in using free grafts of forearm skin for transplant in March 1979. How large an area of skin grafts can be taken and how can their clinical application be extended remained to be investigated further, however. He and Associate Prof Li Ji [2621 0679] of the China University of Medical Sciences jointly launched a basic theoretical research on forearm skin grafts. It took only 1 year's time before the length and the diameter of the artery, the muscle branching, the skin branching, and the capillary net of forearm skin grafts were clarified in detail and new viewpoints concerning the blood supply types of free skin grafts were proposed. It was accurately determined that forearm skin grafts are different from the old "axial skin grafts" and "muscular skin grafts" and are a new type of "arterial trunk net type blood vessel skin grafts." Due to the fact that this type of skin grafts are first discovered in China, foreign specialists have honored the fact by referring them as "Chinese skin grafts." The forearm skin grafts are of good quality, the donor area is large, the caliber of the blood vessels is large, the deviations are few; they are easily taken, their applications are extensive, and they are especially suitable for repairing facial deficiencies and reconstructing organs to open up a new donor area for plastic surgery.

Over the past several years, the Shenyang Troop General Hospital has treated 105 cases [with this technique] and the rate of success reached 97.1 percent.

6248
CSO: 4008/49

SCIENTISTS AND SCIENTIFIC ORGANIZATIONS

LIAONING'S FUSHUN MUNICIPALITY ORGANIZES SCIENCE AND TECHNOLOGY ADVISORY COMMITTEE

Beijing RENMIN RIBAO in Chinese 7 Oct 82 p 3

[Text] In Fushun, Liaoning Province there is an organization that people are hailing as a "brain trust"--the Fushun Municipal Science and Technology Advisory Committee. In more than a year, this "brain trust" has offered a fair amount of advice concerning the municipality's scientific work and production and construction; it has fulfilled a role that certain administrative organs have not been able to handle.

Since the Third Plenum, following the change in the core work of the party, the municipal leadership has come to feel more and more that it is very difficult to satisfactorily direct modernized production and construction by relying upon the experience of the individual. Last year, they organized experts of every field in the municipality and established the Municipal Science and Technology Advisory Committee. They set up 16 specialized groups in the areas of petrochemical works, machinery, textiles, electronics, construction materials, coal, electric power, energy resources, agriculture, forestry, environmental protection, and others. They employed 38 advisors at the municipal level, and 174 persons as advisors for each group. While they were doing various jobs in their original units, they were serving production and construction for the entire municipality.

The Fushun Municipality has already asked that several petrochemical works develop in the direction of "turning oil head to tail gas" you tou hua wei--3111 2435 1553 1442. However, owing to such factors as separation in the face of extreme cold, wax decomposition, and comprehensive utilization of tail gas, they were not certain this would work, and were unable to make a decision. By means of investigation and research and repeated technical demonstrations, the experts on the advisory committee proposed several choices. The municipal leadership made comparisons and developed a policy; they also secured the approval of the relevant provincial and central organs.

Since last year, the advisors on the building materials group joined forces with the concerned units and undertook a serious attack on the question of comprehensive utilization of peat. They made various successful experiments with clay and fibre substituting for wood and with cao-tan [5430 3516] adsorption. They opened the way for the comprehensive utilization of peat.

For more than a year, the textile speciality group has engaged in technical demonstrations in regard to the dissemination and application of self-twisting spinning techniques. The machinery speciality group has convened more than 10 meetings for the discussion of key technical problems; it put forward more than 30 suggestions for improvement in the trial manufacture of the Honggu brand bicycle. The advisory committee also undertook the dissemination and application of irrigation techniques using the excess hot water in power plants. They adopted five new techniques, lowered building costs, and conserved energy resources.

The Fushun municipal committee and the municipal government attach great importance to the Science and Technology Advisory Committee. The Deputy Mayor responsible for scientific and technical work, who is also the Advisory Committee Director, regularly discusses problems with the experts and heeds their opinions.

6722
CSO: 4008/7

AUTHOR: None

ORG: Department of Scientific Research

TITLE: "ZA81-63 Multiple Work Places Automatic Press Successfully Manufactured"

SOURCE: Wuhan HUAZHONG GONGXUEYUAN XUEBAO [JOURNAL OF HUAZHONG (CENTRAL CHINA) UNIVERSITY OF SCIENCE AND TECHNOLOGY] in Chinese No 6, 1982 p 136

ABSTRACT: The ZA81-63 multiple work places automatic press was designed by the Forging and Press Teaching and Research Office of Central China University of Science and Technology and jointly manufactured by Sha City Thermos Bottle Plant, Sha City Light Industry Machinery Plant No 1, and the university. Before the press was successfully manufactured, it was necessary for Sha City Thermos Bottle Plant to use four different types of punch presses, etc., to make the bottom of the thermos bottle casing. The worker had to use his foot to press, his hand to convey, and his eyes to aim, and if he was not paying attention his fingers might be cut off. The old-fashioned punch press was, therefore, known as the "mouth of a tiger." The newly designed ZA81-63 has been tried for several months at that plant and produced more than 500,000 pieces of thermos bottle bottoms. The possibility of cutting off fingers has been eliminated and there has been a reduction of 1 percent in the production cost and the rate of waste-products. Two persons now perform the work of six; the machine occupies 20 m^2 of area instead of 52 m^2; the power consumption is reduced from 15.4 kW to 10.6 kW. The machine has been certified to be reasonably structured, capable of

[continuation of HUAZHONG GONGXUEYUAN XUEBAO No 6, 1982 p 136]

conveying the material, punch, and sensing problems and stopping automatically. The problem of safety in stamping work has been basically resolved. Aside from applying it to thermos bottle production, it may also be extended in such light industries as aluminum products, lamps, etc.

6248
CSO: 4009/83

AUTHOR: None

ORG: None

TITLE: "Brief News of China Mathematical Society Computer Mathematics Society Board of Directors Expanded Meeting"

SOURCE: Beijing SHUZHI JISUAN YU JISUANJI YINGYONG [JOURNAL ON NUMERICAL METHODS AND COMPUTER APPLICATIONS"] in Chinese No 3, Sep 82 inside backcover

ABSTRACT: The expanded meeting of the Board of Directors of China Computer Mathematics Society was held in Beijing on 29 Jun-1 Jul 82 and attended by 23 members of the board and 5 delegates of its branches in provinces (cities) and autonomous regions. Revisions to the drafted charter were proposed to have it ready for the 2nd annual national conference. Following this first order of business, the process of organizing the society and the scientific activities of the past 3 years were reviewed. Since the 1st National Conference (1979, in Guangzhou) branches have been organized and established in 13 provinces, cities, and autonomous regions and they have contributed to researches, applications extension, and staff training in the field; achievements of some of these branches have won praises of related departments. The society has, in these 3 years, organized 6 national scientific conferences on such subjects as sample function, finite elements, soliton, fluid dynamics, optimization, numerical application softwares, etc. The members of the board believed, however, in this field there is a need to advocate caution, application, and breakthrough. It was resolved that the 2nd annual national conference of the society should be called in late 83 and a proportional number of delegates were assigned to the established local branches.

6248
CSO: 4009/88

AUTHOR: MA Youzhou [7456 1635 0719]

ORG: Dalian Research Institute of Diesel Locomotives

TITLE: "Applications of Computers in Locomotive Designing and Research in China"

SOURCE: Dalian NEIRAN JICHE [DIESEL LOCOMOTIVE] in Chinese No 12, 15 Dec 82 pp 30-34

ABSTRACT: Following a brief review of the 30+ years and "4 generations" of computers and the development of the various languages of FORTRAN, ALGOL, BASIC, COBOL, PL/1, PASCAL, etc. and the various software applications, this paper proceeds to introduce the applications of computers in the research and designing of locomotives in the following aspects: (1) Simple scientific computations: Many special and general programs have been extensively adopted in the past several years to compute the properties, structures, and work processes of major parts of locomotives to replace manual calculation and to produce accurate results; (2) Development of optimized designing: Since the 70's, optimization designing with the aid of computers has been gradually applied to engineering designing to resolve such problems of locomotive designing as the selection of geometric parameters of cams, the blade of heat exchanger, the heat release coefficient, etc. (3) Computation of strength and locomotive dynamics: In strength designing, finite element method, for example, has been adopted to compute stress and deformation, etc. (4) Data processing aspects: Application of computers has made it possible to process large quantities of experimental data so as to obtain correct conclusions in the search for objective principles. Finally, the merits of computers and microcomputers, especially with the improved skill of programming, are very briefly summarized.

AUTHOR: CUI Ping [1508 1627]

ORG: General Bureau of Maintenance, Ministry of Railways

TITLE: "Diesel Consumption Calculation Work Experience Exchange Conference Held in Jinchengjiang Diesel Locomotive Maintenance Section"

SOURCE: Dalian NEIRAN JICHE [DIESEL LOCOMOTIVE] in Chinese No 12, 15 Dec 82 p 64

ABSTRACT: In Oct 82, the Bureau of Locomotive Maintenance called the conference in Jinchengjiang Diesel Locomotive Maintenance Section of Liuzhou Railway Bureau for the purpose of strengthening the management of diesel consumption, improving the level of skill of those whose job is to calculate the diesel consumption of the entire railway line so as to raise the economic benefit of the line and to implement the energy conservation requirements of the State. During the meetings, delegates of the 5 sections of Jinchengjian, Shanhaiguan, Beijing, Wunan, and Mawei introduced their experiences in the field. All participants were organized to learn the basic knowledge of computing diesel consumption, the importance of energy management, and the necessity of strengthening the work of calculating the quantity of diesel used. The various railway bureaus were asked to implement the spirit of this conference, to organize manpower to inspect and monitor, and to formulate methods to correct existing problems according to the actual condition of each of the bureaus so as to meet the needs of new development of the entire rail line.

6248

CSO: 4009/89

AUTHOR: None

ORG: None

TITLE: "TRS-80 (I) Microcomputer Expansion System Successfully Made"

SOURCE: Shenyang XIAOXING WEIXING JISUANJI XITONG [MINI-MICRO SYSTEMS] in Chinese No 6, 8 Dec 82 inside backcover

ABSTRACT: The TRS-80 (I) is the microcomputer introduced into China in the greatest numbers in recent years. This personal computer is relatively inexpensive but its lack of external trunk line and accessory connection causes its applications to be limited to a certain extent. In order to make these microcomputers fully beneficial, Shenyang Institute of Computers has prepared for it an expansion system consisting of the 6 components of a GP-IB [general purpose-interface board], an A/D (D/A) [analog to digital] converter, an EPROM programmer, a display buffer, a trunk buffer, and a power source. This expansion system is designed as an independent box, which may be conveniently added onto the TRS-80(I). On 25-28 Oct, the Shenyang Branch Chinese Academy of Sciences invited 37 computer specialists representing 32 units inside and outside of the academy to inspect the system. The delegates certified the system to be a research result of practical significance. Its application will promote the advancement of scientific instruments and the automation of experimental systems in China. Problems concerning its production are being negotiated between the institute and related plants at present.

AUTHOR: DU Chengren [2659 2052 0088]

ORG: None

TITLE: "The SJ-55/40 Computer Passed Certification in Shenyang"

SOURCE: Shenyang XIAOXING WEIXING JISUANJI XITONG [MINI-MICRO SYSTEMS] in Chinese No 6, 8 Dec 82 inside backcover

ABSTRACT: The SJ-55/40 is a small multi-function general purpose computer made by Shenyang Research Institute of Computers, corresponding with the PDP-11/35 of the Digital Equipment Corp. of the USA. On 22-23 Oct, 24 computer specialists representing 18 units were invited to the Shenyang Branch of Chinese Academy of Sciences to inspect the machine. The certification conference decided that on the foundation of the PDP-11/35, some revision and expansion have been achieved for the SJ-55/40 in terms of the scheme and circuit designing. For example, effective measures are adopted regarding to the stability and reliability of the machine. In the process of making the SJ-55/40, the scientists paid attention to absorbing and digesting foreign advanced technology and took into consideration the domestic conditions of application at the same time. Of the 15 types of 2,500 chips used, only a few are imported. The softwares are compatible with those of the PDP-11 series, creating, therefore, a condition for absorbing the rich softwares available with the PDP-11.

6248
CSO: 4009/85

AUTHOR: WEI Shijun [7614 0013 0193]

ORG: None

TITLE: "Brief News of the First Conference of the Special Team of Nuclear Technology

SOURCE: Shanghai HEJISHU [NUCLEAR TECHNIQUES] in Chinese No 6, Dec 82 p 11

ABSTRACT: The First Conference of the Special Team of Nuclear Technology Applications was held in Shanghai on 16 Sep 82. It was chaired by ZHAO Wenyan [6392 2429 1750] of the Mathematics Department of Chinese Academy of Sciences. For the purpose of strengthening the leadership and lessening the burden of old scientists, it was resolved to establish under the group of nuclear physics the 4 special teams of (1) high energy nuclear physics; (2) low energy nuclear physics; (3) nuclear technology applications; and (4) nuclear fusion plasma. With the growing importance of nuclear technology, the nuclear technology applications special team also becomes more important. The delegates unanimously elected ZHANG Jiahua [1728 1367 7520], Director of Shanghai Institute of Nuclear Research Chinese Academy of Sciences to be the head of the team. The task of the special team is, under the guidance of the Mathematics Department, to counsel the following: (1) Understanding and analyzing the development condition of nuclear technology applications; (2) Participating in the formulation of nuclear technology applications development plan; (3) Evaluating or proposing emphasized items of study; (4) Reviewing and evaluating important scientific and technological results. YANG Chengzhong [2799 3397 0022] head of the Nuclear Physics Group came to offer his congratulations.

AUTHOR: XU Zhicheng [1776 1807 2052]

ORG: None

TITLE: "The 2nd Exchange Meeting of Radiation Work Procedure and Radiation Chemistry Held in Chengdu"

SOURCE: Shanghai HEJISHU [NUCLEAR TECHNIQUES] in Chinese No 6, Dec 82 p 51

ABSTRACT: The Radiation Research and Radiation Work Procedure Society China Nuclear Society held its 2nd Radiation Work Procedure and Applied Radiation Chemistry Exchange Meeting in Chengdu from 30 Aug to 3 Sep 82. A total of 113 delegates representing 44 units attended. The meeting received 83 papers, dealing with research results in China in recent years in high molecular radiation chemistry, radiation storage of foods, radiation disinfecting and radiation sources and dosage measurement. According to incomplete statistics, there are now 12 types irradiating products in various quantities for the use of related departments in China. The value of products directly created is about 2,000,000 yuan. The conference dispatched 7 proposals to related department [s] regarding important problems in the work of developing research and extending applications in China [the contents of these problems are not given in the paper.] in this field.

6248
CSO: 4009/86

AUTHOR: QU Fengyuan [1448 6646 3293]

ORG: None

TITLE: "Third National Conference on Physics of Semiconductors"

SOURCE: Beijing BANDAOTI XUEBAO [CHINESE JOURNAL OF SEMICONDUCTOR] in Chinese No 3, May 82 p 255

ABSTRACT: The Third National Conference on Physics of Semiconductors convened in Wuxi City of Jiangsu Province on 15-19 Dec 81; was attended by 133 delegates representing 66 organizations. The conference received outlines of 180 papers, the contents of which involve electronic state, surface, boundary surface, and transfer phenomena, deep energy level foreign matter and defects, noncrystalline states, optical property of semiconductors, physics of components, ion injection, laser annealing, radiation effect, etc. The delegates felt that compared with the Second National Conference, this conference demonstrated an expansion of researches in the field yet compared with the international standard, a substantial distance remained. For example, China has not yet established several very important experimental methods for studying semiconductor characteristics. Compared with other related studies on semiconductors, physics of semiconductors forms a weak link in China. The delegates suggested that the next national conference should be handled by Nanjing University and the 1425 Institute, to be held in 1983.

AUTHOR: FENG Yingzhang [7458 2 19 4545]

ORG: None

TITLE: "Second National Conference on Integrated Circuits and Silicon Materials"

SOURCE: Beijing BANDAOTI XUEBAO [CHINESE JOURNAL OF SEMICONDUCTOR] in Chinese No 3, May 82 p 256

ABSTRACT: The Second National Conference on Integrated Circuit and Silicon Materials, jointly sponsored by China Electronics Society Semicondutor and Integration Technology Society and Electronic Materials Society, was held in Guangzhou on 12-17 Dec 81 and attended by 370 delegates. This annual conference received 330 papers and 263 of these papers were discussed before 8 separate groups on silicon materials quality research, physics, and tests, bipolar circuits, MOS circuits, integrated circuit work procedures, CAD tests and special equipment, work procedure monitor, control, and theoretical analysis, CVD and laser annealing, etc. Four special subject reports, on foreign large-scale and ultra-large-scale integrated circuits, electron microscopic observation of primary eddy defects of silicon monocrystals, integrated linear logic circuits and their application, and prospects of research, experimentation, and production of integrated circuits in the 80's, were delivered before the general conference. The delegates were delighted by the progress of the field accomplished in the 2 years since the first national conference in Fuzhou in Dec 79.

AUTHOR: None

ORG: None

TITLE: "Fourth National Conference on Gallium Arsenide and Related Compounds"

SOURCE: Beijing BANDAOTI XUEBAO [CHINESE JOURNAL OF SEMICONDUCTOR] in Chinese No 3, May 82 p 256

ABSTRACT: The Fourth National Conference on Gallium Arsenide and Related Compounds sponsored by China Society of Metals was held in Shanghai on 25-28 Nov 81. Participants included 139 delegates and 117 papers were received. The contents of the papers included both materials and devices. Delightful results were reported on the purity, completeness, and deep energy level of gallium arsenide and on the newly introduced research on indium phosphide. There has also been progress in studies on crystal growth, extension of multielement solid solutions, and microwave and optical devices. Three symposiums were held during the conference to discuss future development of research on semiconductor compounds, primary and auxiliary materials, analyses and tests, and current problems in scientific research and production for the purpose of promoting mutual understanding and cooperation. It was proposed that the Fifth National Conference should be called jointly by China Society of Metals and China Society of Electronics in 1983.

AUTHOR: FENG Yingzhang [7458 2019 4545]

ORG: None

TITLE: "National Conference on Design and Analysis of Medium and Large Scale Integrated Circuits"

SOURCE: Beijing BANDAOTI XUEBAO [CHINESE JOURNAL OF SEMICONDUCTOR] in Chinese No 3, May 82 pp 256-257

ABSTRACT: The National Conference on Design and Analysis of Medium and Large Scale Integrated Circuits arranged by the Ministry of Machines No 4 the 1424 Institute at the request of China Electronics Society Semiconductor and Integration Technology Society was held in Kunming from 28 Nov to 3 Dec 81. Participants included nearly 80 delegates coming from all over the country and the conference received abstracts of 108 papers. The papers reflected new achievements in China in bipolar 256 digits, 1024 digits ROM, MOS 4K static state, 16K dynamic random access memory, etc. The conference also acknowledged the need of carrying out a great deal of work remaining in this field, such as strengthening the CAD software research, circuit self-designing capability, research on work process models, etc.

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CSO: 4009/90

END